
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

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COPPER IN OCTOBER 1996

While average daily mine production of copper declined by about 5% during October, daily primary refined production rose by about 8%.¹ In response to a drawdown in domestic inventories, rising prices, and strong demand, most primary electrolytic refineries reported increased production. Consumption of refined copper at wire rod mills rose to a record high level in October, despite the closure of two wire rod mills in 1995 having a combined capacity of about 240,000 tons of rod per year. Mills reportedly were operating at or above rated capacities. At least one rod mill reported adding an additional shift while several mills have undergone incremental capacity expansions.

According to data compiled by the International Copper Study Group (ICSG), world demand for refined copper during the first 9 months of 1996 was down by about 75,000 tons, less than 1%, from the equivalent period in 1995, while production of refined copper rose by 400,000 tons. The combination of lower demand and higher production resulted in a near balance between world production and consumption. During the first 9 months of 1995 there had been an apparent production deficit of over 400,000 tons. However, despite the near balance between production and consumption in 1996, copper supplies remained tight. According to the revised ICSG stock series, reported world inventories were only about 600,000 tons at the end of September, or about 18 days at the prevailing rate of world consumption.

Following release of an analysis by the World Bureau of Metal Statistics (see Copper in September 1996) indicating the

“statistical” existence of over 500,000 tons of unreported stocks in the Netherlands, the Dutch statistical office determined that data on the flow of copper in and out of bonded Rotterdam warehouses was seriously flawed and would be subject to revision.²

¹Daily rates assume 7-day-per-week operation of concentrators and refineries; comparison is of output per calendar day.

²Platt's Metals Week. Traders Angered by Copper Stocks Reporting Discrepancy. Dec. 16, 1996, p. 1.

Publication on the Internet

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TABLE 1
SALIENT STATISTICS OF THE COPPER INDUSTRY IN THE UNITED STATES 1/

(Metric tons, unless noted)

	Source table 2/	1995	1996		
			September	October	January- October
Production:					
Primary:					
Mine, recoverable	(2)	1,850,000	159,000	156,000	1,580,000
Smelter 3/	(3)	1,240,000	106,000	113,000	1,040,000
Refinery:					
Electrolytic:					
Domestic	(4)	1,310,000	109,000	127,000	1,120,000
Foreign	(4)	77,300	8,820	3,790	83,400
Electrowon	(4)	539,000	45,900 r/	51,600	476,000
Total	(4)	1,930,000	163,000	183,000	1,680,000
Secondary recoverable copper:					
Refineries	(5)	352,000	26,800	30,600	274,000
Ingot makers 4/	(5)	124,000	10,300	10,300	103,000
Brass and wire-rod mills	(5)	713,000	59,100	62,400	607,000
Foundries, etc.	(5)	62,400	5,200	5,200	52,000
Consumption:					
Total apparent	(8)	2,540,000	257,000	NA	NA
Refined (reported)	(7)	2,530,000	223,000	245,000	2,210,000
Purchased copper-base scrap	(9)	1,650,000	136,000	143,000	1,380,000
Stocks at end of period:					
Total refined	(11)	163,000	143,000 r/	138,000	XX
Blister, etc.	(11)	174,000	161,000 r/	163,000	XX
Prices:					
U.S. producer cathode (cents per pound)	(12)	138.333	98.848	96.873	110.032
Imports:					
Ores and concentrates 5/	(14)	127,000	1,870	NA	NA
Refined	(14)	429,000	62,300	NA	NA
Exports:					
Ores and concentrates 5/	(15)	239,000	12,200	NA	NA
Refined	(15)	217,000	14,500	NA	NA

r/ Revised. NA Not available. XX Not applicable.

1/ Data are rounded to three significant digits, except prices; may not add to totals shown.

2/ Numbers in parentheses refer to the detailed tables where these data are located.

3/ From domestic and foreign ores.

4/ 1996 monthly data estimated based on 1995 monthly average.

5/ Copper content.

TABLE 2
MINE PRODUCTION OF RECOVERABLE COPPER IN THE UNITED STATES 1/

(Metric tons)

State	1995					1996		
	September	October	November	December	Year total	January	February	March
Arizona	102,000	104,000	101,000	105,000	1,170,000	104,000	93,000	108,000
Others 2/	56,200	51,000	46,200	45,700	682,000	50,500	47,900	55,800
Total	158,000	155,000	148,000	151,000	1,850,000	155,000	141,000	164,000

State	1996							
	April	May	June	July	August	September	October	Jan. - Oct.
Arizona	103,000	107,000	106,000	104,000	106,000	101,000	95,400	1,030,000
Others 2/	53,500	53,700	56,100	57,200	58,800	58,100	60,600	552,000
Total	157,000	161,000	163,000	161,000	164,000	159,000	156,000	1,580,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes production from California, Idaho, Michigan, Missouri, Montana, Nevada, New Mexico, Utah, and Wisconsin.

TABLE 3
COPPER 1/ PRODUCED AT SMELTERS IN THE UNITED STATES, BY SOURCE 2/

(Metric tons, copper content)

Period	Domestic and foreign ores	Scrap	Total
1995:			
October	114,000	33,900	148,000
November	105,000	33,700	139,000
December	106,000	35,100	141,000
Jan.-Oct.	1,030,000	289,000	1,320,000
Year total	1,240,000	358,000	1,600,000
1996:			
January	113,000	29,200	142,000
February	108,000	29,800	138,000
March	101,000	33,300	134,000
April	105,000	28,200	133,000
May	94,300	30,600	125,000
June	104,000	30,400	134,000
July	103,000	32,300	136,000
August	97,200	29,100	126,000
September	106,000	31,500 r/	138,000
October	113,000	33,200	146,000
Jan.-Oct.	1,040,000	308,000	1,350,000

r/ Revised.

1/ Includes blister, anode and black copper from primary or secondary sources.

2/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 4
PRODUCTION OF REFINED COPPER, BY SOURCE AND METHOD OF RECOVERY 1/

(Metric tons)

Period	Primary materials				Scrap			Total refined
	Electrolytically refined 2/		Electrowon	Total	Electrolytically refined 2/	Fire refined	Total	
	Domestic 3/	Foreign						
1995:								
October	109,000	8,490	50,400	168,000	16,000	11,700	27,700	196,000
November	116,000	6,330	49,600	172,000	16,100	12,900	29,000	201,000
December	112,000	7,340	50,700	170,000	16,000	11,100	27,100	197,000
Jan.-Oct.	1,080,000	63,600	439,000	1,590,000	182,000	114,000	296,000	1,880,000
Year total	1,310,000	77,300	539,000	1,930,000	215,000	137,000	352,000	2,280,000
1996:								
January	117,000	11,300	47,500	176,000	14,300	13,400	27,700	204,000
February	107,000	9,990	43,500	161,000	13,700	12,800	26,400	187,000
March	112,000	9,570	45,900	168,000	14,200	14,000	28,200	196,000
April	115,000	9,790	47,400	173,000	14,200	10,400	24,700	197,000
May	112,000	9,500	50,700	172,000	16,900	12,700	29,600	202,000
June	98,800	5,180	48,300	152,000	17,300	13,700	30,900	183,000
July	115,000	8,090	48,200	172,000	18,100	6,310	24,400	196,000
August	107,000	7,370	47,100	161,000	14,000	11,000	25,000	186,000 r/
September	109,000	8,820	45,900 r/	163,000	12,900	13,900	26,800	190,000
October	127,000	3,790	51,600	183,000	17,200	13,500	30,600	213,000
Jan.-Oct.	1,120,000	83,400	476,000	1,680,000	153,000	122,000	274,000	1,960,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Based on source of material at smelter level.

3/ Includes fire-refined copper.

TABLE 5
COPPER RECOVERABLE IN UNALLOYED AND ALLOYED FORM FROM PURCHASED COPPER-BASED SCRAP 1/

(Metric tons, copper content)

Period	Refineries 2/		Ingot makers 3/		Brass and wire-rod mills		Foundries, etc. 4/		Total 5/
	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1995:									
October	9,500	18,200	2,890	7,440	56,300	4,090	2,240	2,960	104,000
November	10,100	18,900	2,890	7,440	54,600	3,650	2,240	2,960	103,000
December	8,870	18,200	2,890	7,440	45,400	3,650	2,240	2,960	91,700
Jan.- Oct.	92,700	203,000	28,900	74,400	564,000	42,000	22,400	29,600	1,060,000
Year total	112,000	240,000	34,700	89,200	664,000	49,300	26,900	35,600	1,250,000
1996:									
January	11,100	16,600	2,890	7,440	59,400	3,350	2,240	2,960	106,000
February	9,790	16,600	2,890	7,440	54,000	2,980	2,240	2,960	99,000
March	11,100	17,200	2,890	7,440	57,600	2,660	2,240	2,960	104,000
April	8,200	16,500	2,890	7,440	57,400	4,240	2,240	2,960	102,000
May	10,000	19,600	2,890	7,440	60,100	4,230	2,240	2,960	109,000
June	10,900	20,000	2,890	7,440	58,700	4,960	2,240	2,960	110,000
July	6,010	18,400	2,890	7,440	51,500	3,880	2,240	2,960	95,300
August	8,310	16,700	2,890	7,440	56,700	3,870	2,240	2,960	101,000
September	10,300	16,500	2,890	7,440	55,300	3,850	2,240	2,960	101,000
October	10,900	19,800	2,890	7,440	58,700	3,640	2,240	2,960	109,000
Jan.- Oct.	96,500	178,000	28,900	74,400	569,000	37,700	22,400	29,600	1,040,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Electrolytically refined and fire-refined scrap based on source of material at smelter level.

3/ Data no longer collected monthly; 1995 and 1996 data estimated based on 1995 annual data.

4/ Estimate based on 1995 annual data.

5/ Does not include an estimate, based on reported 1995 data, of 3,100 tons per month from new scrap and 2,330 tons per month from old scrap of copper recovered from scrap other than copper-base.

TABLE 6
PRODUCTION, SHIPMENTS, AND STOCKS OF BRASS AND WIRE-ROD MILL SEMIFABRICATES 1/

(Metric tons, gross weight)

Period	Production		Shipments		Stocks, end of period	
	Brass mills	Wire rod mills	Brass mills	Wire rod mills	Brass mills	Wire rod mills
1995:						
October	120,000	161,000	118,000	154,000	51,300	64,900
November	113,000	143,000	118,000	141,000	46,400	67,300
December	105,000	134,000	98,600	132,000	52,500	69,100
Jan.- Oct.	1,200,000	1,540,000	1,210,000	1,550,000	XX	XX
Year total	1,420,000	1,820,000	1,430,000	1,820,000	XX	XX
1996:						
January	120,000	144,000 r/	122,000	146,000 r/	50,100	67,100 r/
February	128,000	153,000 r/	130,000	157,000 r/	48,800	63,500 r/
March	144,000	171,000 r/	142,000	160,000 r/	51,300	74,300 r/
April	131,000	157,000 r/	133,000	175,000 r/	49,400	55,800 r/
May	130,000	173,000 r/	129,000	165,000 r/	51,000	63,200 r/
June	136,000	163,000 r/	132,000	151,000 r/	54,900	75,200 r/
July	114,000	139,000 r/	116,000	152,000	52,300	62,900 r/
August	130,000	142,000 r/	133,000	156,000 r/	49,700	48,500 r/
September r/	135,000	163,000	136,000	158,000	48,900	53,200
October	138,000	180,000	138,000	184,000	49,000	50,100
Jan.- Oct.	1,310,000	1,590,000	1,310,000	1,600,000	XX	XX

r/ Revised. XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

TABLE 7
CONSUMPTION OF REFINED COPPER 1/

(Metric tons)

Period and item	Wire rod mills	Brass mills 2/	Other plants 3/	Total
1995:				
October	163,000	44,000	4,630 r/	212,000 r/
November	150,000	44,400	4,630 r/	199,000 r/
December	132,000	40,700	4,630 r/	177,000 r/
Jan.-Oct.	1,660,000	448,000	46,300	2,160,000
Year total	1,950,000	533,000	55,600 r/	2,530,000
1996:				
January	155,000	45,100	4,630 r/	205,000 r/
February	166,000	47,200	4,630 r/	218,000 r/
March	183,000	56,400	4,630 r/	244,000
April	164,000	47,500	4,630 r/	216,000 r/
May	185,000	47,500	4,630 r/	237,000 r/
June	165,000	49,600	4,630 r/	219,000
July	148,000	43,600 r/	4,630 r/	196,000
August r/	155,000	50,700	4,630	210,000
September	163,000	55,400	4,630	223,000
October:				
Cathodes	185,000	32,900	1,120	219,000
Wire bars	--	W	W	W
Ingots and ingot bars	--	1,770	1,660	3,430
Cakes and slabs	--	7,360	W	7,360
Billets and other	--	12,400	1,860	14,200
Total	185,000	54,400	4,630	245,000
Jan.-Oct.	1,670,000	497,000	46,300	2,210,000

r/Revised. W Withheld to avoid disclosing company proprietary data; included in "Billets and other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ In 1995, brass mills consumed 2,210 tons of refined lead, 706 tons of pig tin, 3,870 tons of refined nickel, and 64,100 tons of slab zinc.

3/ Monthly consumption by ingot makers, chemical plants, foundries, and miscellaneous manufacturers; estimated based on 1995 annual data.

TABLE 8
U.S. APPARENT CONSUMPTION OF COPPER 1/

(Metric tons)

Period	Refined copper production	Copper in old scrap 2/	Net refined imports	Stock change during period	Apparent consumption
1995:					
October	168,000	35,100	29,600	(2,050)	235,000
November	172,000	35,300	31,900	5,380	234,000
December	170,000	34,600	30,800	30,900	205,000
Jan.-Sept.	1,420,000	337,000	119,000	10,300	1,860,000
Year total	1,930,000	442,000	211,000	44,500	2,540,000
1996:					
January	176,000	32,700	29,400	28,600	210,000
February	161,000	32,300	24,800	(21,400)r/	239,000
March	168,000	32,600	35,500	(7,120)r/	243,000
April	173,000	33,400	37,300	10,800	232,000
May	172,000	36,500	46,000	(26,400)	281,000
June	152,000	37,700	33,900	(7,580)	232,000
July	172,000	35,000	38,000	23,200 r/	222,000 r/
August	161,000	33,300	47,100	(6,850)r/	248,000 r/
September	163,000	33,100	47,800	(13,000)r/	257,000 r/
October	183,000	36,100	NA	(4,970)	NA
Jan.-Sept.	1,500,000	307,000	340,000	(19,700)	2,160,000

r/ Revised. NA Not available.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes reported monthly production of copper from old scrap of copper-base and of non-copper-base materials and estimates for annual reporters based on 1995 data.

TABLE 9
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/

(Metric tons, gross weight)

Period	Smelters and refineries		Ingot makers 2/		Brass and wire-rod mills 3/		Foundries, etc. e/		Total scrap used
	New scrap 2/	Old scrap	New scrap	Old scrap	New scrap	Old scrap	New scrap	Old scrap	
1995:									
October	10,800	29,800	3,870	11,300	70,100	4,950	2,570	3,390	137,000
November	12,300	29,400	3,870	11,300	68,300	4,380	2,570	3,390	136,000
December	10,100	32,100	3,870	11,300	57,100	4,460	2,570	3,390	125,000
Jan.- Oct.	106,000	323,000	38,700	113,000	702,000	50,500	25,700	33,900	1,390,000
Year total	128,000	385,000	46,400	136,000	827,000	59,400	30,800	40,600	1,650,000
1996:									
January	12,600	26,600	3,870	11,300	74,300	4,100	2,570	3,390	139,000
February	10,700	28,200	3,870	11,300	68,200	3,830	2,570	3,390	132,000
March	11,700	32,200	3,870	11,300	72,300	3,570	2,570	3,390	141,000
April	9,680	26,800	3,870	11,300	71,900	5,000	2,570	3,390	134,000
May	10,800	31,400	3,870	11,300	75,500	5,100	2,570	3,390	144,000
June	13,200	36,300	3,870	11,300	73,500	5,990	2,570	3,390	150,000
July	8,120	27,900	3,870	11,300	65,500	4,790	2,570	3,390	127,000
August	10,000	28,300	3,870	11,300	72,000	4,880	2,570	3,390	136,000
September	12,700	27,000	3,870	11,300	70,100 r/	5,010	2,570	3,390	136,000
October	11,600	33,500	3,870	11,300	72,600	4,510	2,570	3,390	143,000
Jan.- Oct.	111,000	298,000	38,700	113,000	716,000	46,800	25,700	33,900	1,380,000

e/ Estimated. r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data for 1995 and 1996 are estimated from 1995 annual data.

3/ Consumption at brass and wire-rod mills assumed equal to receipts.

TABLE 10
CONSUMPTION OF PURCHASED COPPER-BASE SCRAP 1/ 2/

(Metric tons, gross weight)

Scrap type and processor	1995		1996			
	Jan.-Oct.	Year total	August	September	October	Jan.-Oct.
No. 1 wire and heavy:						
Smelters and refiners	122,000	161,000	11,600	14,600	14,300	127,000
Brass and wire-rod mills	319,000	375,000	28,300	27,300 r/	31,200	301,000
No. 2 mixed heavy and light:						
Smelters and refiners	175,000	225,000	16,000	14,500	20,300	177,000
Brass and wire-rod mills	28,800	33,400	2,900	3,070	2,500	29,900
Total unalloyed scrap:						
Smelters and refiners	297,000	386,000	27,500	29,100	34,700	304,000
Brass mills	315,000	408,000	31,200	30,400	33,700	331,000
Red brass: 3/						
All plants	55,400	66,200	5,540	5,400	5,430	54,400
Leaded yellow brass:						
All plants	293,000	367,000	34,800	33,700	36,200	337,000
Yellow and low brass:						
Smelters and refiners	(4/)	(4/)	(4/)	(4/)	(4/)	(4/)
Brass mills	38,500	47,500	4,290	4,400	4,020	42,800
Cartridge cases and brass:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	42,300	49,400	3,570	3,750	3,860	37,400
Auto radiators:						
Smelters and refiners	60,800	73,000	6,080	6,080	6,080	60,800
Bronzes:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	9,680	11,300	1,050	868	1,030	9,180
Nickel-copper alloys:						
Smelters and refiners	--	--	--	--	--	--
Brass mills	14,900	17,700	3,170	3,380	1,250	19,500
Low grade & residues:						
Smelters and refiners	67,100	91,800	7,410	7,620	7,360	73,600
Other alloy scrap: 5/						
Smelters and refiners	33,000	39,700	3,710	3,290	3,380	34,500
Brass mills	3,340	3,920	358	309 r/	460	3,740
Total alloyed scrap:						
Smelters and refiners	258,000	310,000	26,000	25,800	25,600	257,000
Brass mills	404,000	478,000	45,700	44,700	45,200	433,000
Total scrap:						
Smelters and refiners	581,000	695,000	53,500	54,900	60,300	561,000
Brass and wire-rod mills	752,000	886,000	76,900	75,100 r/	78,900	764,000

r/ Revised.

1/ Does not include: consumption by foundries, chemical plants and miscellaneous manufacturers, estimated to total about 6,000 tons of scrap per month in 1995; consumption of home scrap at brass mills which averaged 57,200 tons per month in 1995. Monthly data include estimates of about 30,000 tons of scrap per month consumed by ingot makers and several smelters that report only on an annual basis.

2/ Data are rounded to three significant digits; may not add to totals shown.

3/ Includes composition turnings, silicon bronze, zincy bronze, railroad car boxes, cocks and faucets, gilding metal and commercial bronze.

4/ Withheld to avoid disclosing company proprietary data; included in "Other alloy scrap."

5/ Includes refinery brass, beryllium copper, phosphor copper and aluminum bronze.

TABLE 11
COPPER STOCKS AT END OF PERIOD 1/

(Metric tons)

Period	Crude copper 2/	Refined copper					LME 6/	Total refined
		Refineries 3/	Wire rod mills 3/	Brass mills 3/	Other 4/	Comex 5/		
1995:								
October	180,000	39,600	24,900	12,100	3,540	5,540	41,200	127,000
November	170,000	37,900	26,700	11,700	3,540	4,900	47,500	132,000
December	174,000	38,000	24,800	7,110	3,540	21,500	68,200	163,000
1996:								
January	172,000	35,700	34,500	10,400	3,540	11,000	96,700	192,000
February	177,000	31,700	22,600	11,200	3,540	11,700	89,600	170,000
March	153,000	33,800	19,500	9,820	3,540	12,600	84,000	163,000
April	171,000	35,600	25,500	11,300	3,540	18,800	79,400	174,000
May	166,000	35,500	19,200	9,840	3,540	12,000	67,500	148,000
June	162,000	33,500	13,100	12,600	3,540	6,880	70,400	140,000
July	154,000	41,700	29,700 r/	13,400 r/	3,540	16,100	58,700	163,000
August	159,000	34,000	25,800	13,400	3,540	20,100	59,600	156,000
September	161,000 r/	32,400 r/	19,400	12,500 r/	3,540	19,700	56,000	143,000 r/
October	163,000	33,900	31,000	12,400	3,540	28,600	29,200	138,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Copper content of blister and other materials in transit and in process of refining.

3/ Stocks of refined copper as reported; no estimates are made for non-respondents.

4/ Monthly estimates based on reported and 1995 annual data, comprising stocks at secondary smelters, chemical plants, foundries, and miscellaneous manufacturers.

5/ Commodity Exchange Inc., New York.

6/ London Metal Exchange Ltd., U.S. warehouses.

TABLE 12
AVERAGE PRICE OF COPPER IN THE UNITED STATES AND
ON THE LONDON METAL EXCHANGE

(Cents per pound)

Period	U.S. producers delivered price		Comex first position 3/	L.M.E. cash price Grade A
	Cathode 1/	Wirebar 2/		
1995:				
October	131.380	139.995	127.996	127.582
November	139.860	148.500	136.500	134.986
December	135.103	143.778	131.778	132.683
Average	138.333	146.724	134.717	133.122
1996:				
January	121.431	130.090	118.091	118.622
February	120.020	128.668	116.668	115.077
March	121.540	130.200	118.200	116.140
April	122.628	131.286	119.286	117.707
May	126.667	135.327	123.327	120.527
June	107.828	116.538	104.488	98.447
July	94.007	102.693	90.667	90.006
August	95.479	104.139	92.139	91.072
September	93.848	102.623	90.508	88.026
October	96.873	105.533	93.533 r/	88.935
Average	110.032	118.710	106.691	104.456

r/ Revised.

1/ Listed as "U.S. producer cathode."

2/ Listed as "Electrolytic wirebar (Warrenton Refining Co.)."

3/ Listed as "Comex high grade first position."

Sources: Platt's Metals Week and American Metal Market.

TABLE 13
NEW YORK AVERAGE BUYING PRICES FOR COPPER SCRAP

(Cents per pound)

Month	Brass mills No. 1 scrap	Refiners No. 2 scrap	Dealers (New York)	
			No. 2 scrap	Red brass turnings and borings
1995:				
October	120.17	104.50	92.27	67.00
November	125.91	106.96	91.80	66.00
December	120.89	103.96	92.00	66.00
Average	123.28	104.73	91.26	63.38
1996:				
January	112.46	95.09	87.98	57.86
February	111.85	93.83	89.75	57.00
March	113.06	96.54	92.53	57.66
April	114.20	96.99	84.43	58.00
May	116.25	97.10	84.59	57.84
June	96.95	83.00	77.85	55.35
July	88.58	69.76	64.43	46.79
August	90.85	73.93	64.00	46.09
September	88.69	72.56	64.00	46.00
October	89.21	73.04	64.00	46.00
Average	102.21	85.18	77.36	52.86

Source: American Metal Market.

TABLE 14
U.S. IMPORTS FOR CONSUMPTION OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1996			1996			1996			1996		
	1995	Sept.	Jan.-Sept.	1995	Sept.	Jan.-Sept.	1995	Sept.	Jan.-Sept.	1995	Sept.	Jan.-Sept.
Brazil	--	--	--	--	--	--	--	--	--	15,500	--	13,600
Canada	(2/)	246	8,980	590	34	212	40,000	222	3,490	283,000	30,100	266,000
Chile	80,400	--	52,400	--	--	--	38,000	4,920	40,400	29,100	13,200	79,800
Germany	--	--	--	--	--	--	--	--	--	12,300	--	17
Japan	--	--	--	4	--	--	(2/)	(2/)	(2/)	7,740	650	2,640
Malaysia	--	--	--	55	--	79	--	--	--	--	--	--
Mexico	11,700	1,630	3,660	2,190	95	1,590	2,350	--	18,800	58,600	1,600	27,200
Peru	34,900	--	--	--	--	--	10,400	6,340	6,340	9,860	7,080	53,900
Russia	--	--	--	--	--	--	--	--	--	11,600	8,680	14,600
Spain	--	--	--	--	--	--	3,260	320	2,530	--	--	--
Taiwan	--	--	--	1	(2/)	22	--	--	--	--	--	--
Uzbekistan	--	--	--	--	--	--	--	--	--	--	1,010	3,000
Other	2 r/	--	3	13 r/	--	1	(3/)	--	649	620 r/	14	3,380
Total	127,000	1,870	65,100	2,860	130	1,900	94,100	11,800	72,200	429,000	62,300	465,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

3/ Revised to zero.

Source: Bureau of the Census.

TABLE 15
U.S. EXPORTS OF COPPER (UNMANUFACTURED), BY CLASS 1/

(Metric tons, copper content)

Country or territory	Ore and concentrate			Matte, ash and precipitates			Blister and anodes			Refined		
	1995	1996		1995	1996		1995	1996		1995	1996	
		Sept.	Jan.-Sept.		Sept.	Jan.-Sept.		Sept.	Jan.-Sept.		Sept.	Jan.-Sept.
Belgium	1,980	--	--	1,330	--	3	81	--	239	2,260	--	37
Canada	123,000	6,750	67,500	30,400	3,510	27,700	24,800	1,620	15,100	22,900	2,000	22,100
China	37,100	--	51,800	17	2	2	211	--	44	5,130	8	8
Germany	--	--	72	152	--	1	84	--	385	629	12	109
Hong Kong	--	--	16	48	--	29	650	--	372	4,710	48	490
Italy	--	--	8	--	--	--	245	--	426	1,580	--	2,150
Japan	53,500	5,430	11,000	1,880	56	1,860	363	--	390	52,800	3,890	25,400
Korea, Republic of	5,520	--	2	10	6	15	1,440	--	420	11,200	416	2,760
Malaysia	--	--	--	--	--	--	--	(2/)	(2/)	4,110	203	5,620
Mexico	160	--	2,340	763	605	1,370	219	29	297	2,710	779	3,920
Peru	1,180	--	1,750	9	--	--	--	--	--	--	--	129
Philippines	16,000	--	--	--	--	--	20	6	17	3	--	--
Singapore	5	--	--	18	(2/)	(2/)	39	--	40	12,700	337	1,380
Taiwan	--	--	--	201	--	--	137	1	161	75,000	6,060	38,800
Thailand	34	--	--	--	--	--	124	--	58	18,700	650	20,900
Venezuela	--	--	--	--	--	--	860	--	6	27	--	25
Other	341	--	242	220	17	541	226	9	283	3,030	100	733
Total	239,000	12,200	135,000	35,100	4,200	31,500	29,500	1,670	18,300	217,000	14,500	125,000

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 16
U.S. COPPER SCRAP TRADE 1/

(Metric tons, gross weight)

Country or territory	Imports						Exports					
	Unalloyed			Alloyed			Unalloyed			Alloyed		
	1995	1996		1995	1996		1995	1996		1995	1996	
Sept.		Jan.-Sept.	Sept.		Jan.-Sept.	Sept.		Jan.-Sept.	Sept.		Jan.-Sept.	
Belgium	11	--	--	294	--	--	2,730	411	8,460	3,030	84	1,120
Canada	36,600	2,890	28,700	64,600	4,810	43,300	110,000	7,720	75,000	42,600	2,840	30,900
Chile	9,270	996	8,740	66	--	129	--	--	--	7	1	5
China	--	--	--	21	--	62	28,000	1,020	10,100	50,100	1,080	20,200
Colombia	325	10	446	1,280	131	2,340	--	--	--	9	--	3
Costa Rica	848	115	1,030	524	36	332	--	--	--	--	--	--
Dominican Republic	702	75	387	1,860	133	1,560	--	--	--	--	--	--
Germany	--	1	4	64	--	122	1,580	--	3,280	4,310	639	4,570
Hong Kong	--	--	--	23	2	114	31,400	1,800	22,700	30,900	4,000	36,600
India	--	--	--	--	--	--	7,020	81	3,700	42,500	2,690	21,900
Japan	--	--	--	124	(2/)	35	20,000	1,810	13,900	16,700	2,220	12,800
Korea, Republic of	--	--	--	14	--	--	10,300	341	4,290	24,100	391	8,400
Mexico	32,800	1,840	22,100	50,500	2,670	33,500	6,470	40	2,450	1,710	174	3,570
Panama	1,170	112	739	776	79	800	--	--	--	--	--	--
Peru	166	122	622	116	60	436	--	--	--	6	--	612
Sweden	--	--	--	--	28	205	--	--	--	1,110	79	1,610
Switzerland	--	--	--	--	--	--	17	--	2,760	140	--	18
Taiwan	--	21	56	2,940	115	1,110	1,680	169	734	3,730	319	3,650
Thailand	--	--	--	8	--	36	--	--	37	2,490	391	1,720
United Kingdom	111	(2/)	(2/)	201	120	994	338	--	194	2,810	65	274
Venezuela	3,260	154	2,310	2,860	116	1,980	--	--	--	22	--	40
Other	2,830 r/	210	2,370	7,290 r/	491	5,970	3,570	127	518	7,110 r/	108	4,040
Total	88,100	6,540	67,600	134,000	8,790	93,100	223,000	13,500	148,000	233,000	15,100	152,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Less than 1/2 unit.

Source: Bureau of the Census.

TABLE 17
U.S. IMPORTS OF COPPER SULFATE 1/

(Gross weight, metric tons)

Country or territory	1995	1996						Year to date
		First quarter	Second quarter	Third quarter			Total	
				July	August	September		
Canada	1,960	979	1,110	309	200	405	913	3,000
Chile	250	--	83	41	62	41	145	228
China	68	78	380	240	160	--	400	858
Israel	1,680	231	245	143	102	143	388	865
Mexico	5,570	2,480	2,550	819	776	743	2,340	7,370
Netherlands	542	--	--	--	--	--	--	--
Peru	579	98	296	98	80	158	336	729
Poland	404	--	--	--	--	--	--	--
Russia	333	8	--	--	22	--	22	29
South Africa	736	--	--	--	--	--	--	--
Other	289	22	20 r/	1	2	18	24	61
Total	12,400	3,890	4,680	1,650	1,400	1,510	4,560	13,100

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 18
U.S. EXPORTS OF COPPER SULFATE 1/

(Gross weight, metric tons)

Country or territory	1995	1996						Year to date
		First quarter	Second quarter	Third quarter			Total	
				July	August	September		
Belgium	--	21	--	--	--	--	--	21
Canada	2,870	799	586	99	64	132	295	1,680
Chile	33	--	--	--	--	--	--	--
Colombia	62	--	--	--	--	--	--	--
Costa Rica	--	--	--	--	--	32	32	32
Denmark	--	--	7	--	--	--	--	7
Dominican Republic	--	9	--	--	--	--	--	9
Honduras	43	6	20	--	--	--	--	26
Pakistan	--	--	5	--	--	--	--	5
Philippines	--	--	--	--	7	--	7	7
Taiwan	--	--	--	--	--	53	53	53
Other	71 r/	10	6	--	--	--	--	16
Total	3,080	845	624	99	71	216	386	1,860

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.